

AMENDMENTS TO THE DRAWINGS:

Please find accompanying this response replacement sheets for Fig. 1. The drawing amendments effect the following changes:

The embodiment of the apparatus of Fig. 2 has been utilized as the basis for the amended replacement because the structural features illustrated, including the first and second substrate wafers with the channel, the passage openings, and the other openings in the small plate are seen to better advantage.

Additionally, because the drawing is an “exploded” view wherein the two substrate wafers are shown separated, additional dashed lines and arrows showing where the openings (5) of passages (41 and 42), in the second, lower substrate wafer (2), connect with the channel (3) in the upper wafer (1), when the two substrate wafers are assembled and in contact with one another have been added to the amended replacement drawing figure.

REMARKS

Claims 1 - 16 are now in this application. Claims 4 and 15 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, as set forth in the Office Action, and to include all of the limitations of the base claim and any intervening claims. Claims 1 - 15 are rejected. New claim 16 is added. Claims 1 - 15 are amended herein to clarify the invention, to express the invention in alternative wording, to address matters of form unrelated to substantive patentability issues, and to place the claims indicated by the Examiner to contain allowable subject matter into allowable form.

Applicants respectfully request that the Examiner acknowledge receipt of the priority document in this application.

Since the present application is a U.S. national stage application of a PCT application, the priority document was filed with the International Bureau. The Examiner is respectfully requested to obtain the priority document from the PCT/designated office unit in the U.S. Patent Office and acknowledge receipt thereof in the next Office Action.

In the Office Action, the drawings were objected to because the Examiner finds that in Figure 1 it is unclear from the original drawing whether the passage and opening and channel extend from the surface of the substrate or are formed in the substrate.

This has been corrected by the submission herewith of an amended replacement drawing Figure 1. In the amended replacement drawing Figure 1, the embodiment of the apparatus of original drawing Figure 2 has been utilized as the basis for the amended replacement drawing because the two substrate wafers and the other structural elements thereon, including the channel, the passage openings, and the other openings can be more readily seen thereon. In addition, because this drawing affords an "exploded" view of the two substrate wafers, separated from one another, dashed lines with arrows have been shown to indicate that the openings (5) in the passages (41, 42) of the lower substrate wafer (2) communicate with the channel (3) in the upper substrate wafer (1), when the two substrate wafers are in communication with each other.

With regard to both original and amended drawing Figures 1, the Examiner is again respectfully reminded that the particular illustrations are not deemed to be limiting and that the channel (3) may, but does not have to, extend over the entire length of the substrate wafer; and that the solid phase material may be introduced by way of an opening at the top of the upper substrate wafer.

In the Office Action, previous claims 1 - 15 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. In particular, the Examiner indicated that the phrases "passage openings are separated

from the channel by a partially permeable sieve-like membrane” (claim 1, lines 7 - 8) and “said passage” (claim 1, line 14) were unclear.

All of the foregoing bases for the 35 U.S.C. 112, second paragraph rejections are believed to have been overcome by the amendments presented herein above.

In the Office Action, previous claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,120,511 to Luft (“Luft”). The Examiner contends that Luft discloses an apparatus having each and every one of the elements of the apparatus of the present application, as recited according to previous claim 1.

Applicant respectfully disagrees with the Examiner’s analysis and conclusion of anticipation of the apparatus of the present application by Luft, for the following reasons.

Applicant points out that Luft discloses an apparatus having a completely different purpose, namely, a device for the adsorption-dependent visualization, in color, of contaminants in the air. Although the Applicant acknowledges that Luft may contain certain structural elements that, taken individually, and out of context of the overall apparatus of Luft, may at first appear to be at least superficially similar to certain of the elements of the apparatus of the present application, overall there are numerous differences between the device of Luft and the apparatus of the present application such that Luft does not anticipate the apparatus of the present

application. In particular, one significant difference between the two is that the device of Luft lacks the two additional openings that are found in the apparatus of the present application. Furthermore, Luft discloses that the membrane used in that device is composed of a paper filter material, such as, e.g., a Whatman paper filter, which is unable to withstand operation under high liquid pressure, unlike the apparatus of the present application. In the Luft device, moreover, there are no means provided for temporarily closing the openings, unlike in the apparatus of the present application.

Therefore, Applicant respectfully requests that the 35 U.S.C. 102(b) based rejection of previous claim 1 over Luft be withdrawn and Applicant submits that such rejection is not applicable to claim 1 as amended herein above.

In the Office Action, previous claims 1 and 9 -12 were rejected under 35 U.S.C. 102(b) as being anticipated by the article from the journal "Analytical Chemistry", May 1, 2001 issue, by Jiang, Wang, Locascio, and Lee ("Jiang"). Applicant respectfully points out that the publication date of this reference, and thus its reference date, is later than the priority date claimed for the present application. Applicant respectfully submits that this reference should have been withdrawn because the Examiner should have already received a copy of the priority document from the PCT/designated office of the USPTO. Inasmuch as the Examiner has not yet acknowledged receipt of same and recognition of the claim to and date of

priority, it is again requested that such certified copy of the priority document be obtained by the Examiner through channels and that upon receipt of same the rejection in view of Jiang immediately be withdrawn.

In the Office Action, the following rejections for obviousness under 35 U.S.C. 103(a) were made over Jiang.

Previous claims 2 and 5 - 8: Jiang in view of U.S. Patent 5,585,011 to Sasaki et al ("Sasaki");

Previous claim 3: Jiang in view of U.S. Published Patent Application 2002/0058332 to Quake et al ("Quake");

Previous claims 13 and 14: Jiang in view of U.S. Patent 5,441,597 to Bonne et al ("Bonne").

Applicant respectfully points out that the reference date of Jiang, namely, its publication date of May 1, 2001, is later than the priority date of March 5, 1999, claimed by the present application, based on German Patent Application No. 199 10 392.5. Accordingly, the Jiang reference should be removed. All of these rejections should be withdrawn in view of the priority date of the present application being earlier than the reference date of Jiang. The rejection is inapposite to either the previous claims in the application or the amended and new claims presented by this Amendment.

Moreover, the reference date of Quake of May 16, 2002, is later than the priority date of March 5, 1999, claimed for the present application based on German Patent Application 199 10 392.5. Accordingly, that reference should also be removed.

With regard to the above-mentioned rejection over Jiang in view of Bonne, Applicant respectfully points out that Bonne discloses a device for controlling serve-valves in flow passages, which is a completely different field from that of the present invention. Accordingly, Applicant respectfully states that a person of ordinary skill in the art to which the present application relates would have no motivation for combining the disclosure of Jiang with Bonne, and that even when such combination is made, the result is different from the apparatus of the present application.

In the Office Action, previous claims 2 and 5 - 8 were also rejected under 35 U.S.C. 103(a) as being obvious and unpatentable over Luft in view of Sasaki.

It is respectfully submitted that this rejection should be withdrawn in view of the arguments presented herein above distinguishing the apparatus of the present application from that of Luft, for purposes of overcoming the 35 U.S.C. 102 (b) rejection, both as to the previous claims in the present application and with respect to the amended and new claims presented by this Amendment.

The Examiner rejected previous claim 2 over Luft in view of Sasaki on the grounds that Luft discloses all of the features of the apparatus of Luft except for the specific material used for the first and second substrate wafers, i.e., glass and silicon, respectively; but that because Sasaki discloses the specific use of such materials, the Examiner contends that it would have been obvious to a person of ordinary skill in the art to which the invention of the present application pertains, at the time the present invention was made, to utilize the materials of Sasaki in the device according to Luft, and that the resulting apparatus would be identical to that of the present application.

Applicant respectfully disagrees because it has been shown herein above that the device disclosed in Luft is substantially different from that of the present application in numerous other ways than merely utilizing different materials for fabricating the two substrate wafers, so that even if the materials for the two substrate wafers of Sasaki were used in the device of Luft, the resulting apparatus would still be very different from that of the present application.

Accordingly, the 35 U.S.C. 103(a) based rejection of the previous claims of the present application over Luft in view of Sasaki should be withdrawn and applicant respectfully submits that such a rejection should not be applied to any of the amended and new claims presented by this Amendment.

In the Office Action, previous claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Luft in view of Quake.

Applicant respectfully submits that this reejection should be withdrawn in view of the foregoing remarks regarding Luft and Quake. Applicant further respectfully submits that there is noting in Luft or Quake that teaches, discloses, or suggests their combination to a person of ordinary skill in the art; and that even if these references are combined, the result is different from the apparatus of the present application.

In view of the foregoing remarks, Applicant respectfully submits that all previously made 35 U.S.C. 102(b) and 103(a) based rejections of the claims over Luft or Jiang, alone or in further combination with any of Sasaki, Quake , and Bonne should be withdrawn and are not applicable to any of the claims in the application after entry of the present Amendment. Accordingly, amended claims 1 - 4 should now be allowable over those references.

Claims 4 and 15 have been amended to place them in allowable form in accordance with the Examiner's indications. New claim 16 contains the subject matter of allowable claim 4, together with previous claims 1 and 3, from which claim 4 previously depended. The dependency of claim 15 has been changed from claim 4 to new claim 16. The dependencies of other claims following claim 4 has also been changed to new claim 16. Those claims should now also be allowable.

Claims 1 - 16, presented for entry into the file of the present application by this Amendment represent a total of 16 claims, including 2 independent claims (claims 1 and 16) and 14 dependent claims. Accordingly, no additional claims fees are due at this time since there are not more than a total of 20 claims, including more than 3 independent claims in the above. This Amendment is being submitted within the original three month shortened statutory period for response, therefore, a Request for an Extension of Time is not required and no fee for an extension of the time to respond is presently due.

The Examiner is respectfully reminded that the present application is one of sole inventorship, not multiple inventorship, as asserted in numbered paragraph 9 of the present Office Action. Accordingly, the subject matter of all pending claims is attributable to the sole inventor, Johann Michael Koehler.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
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enc: Replacement and Annotated drawing sheets of Fig. 1